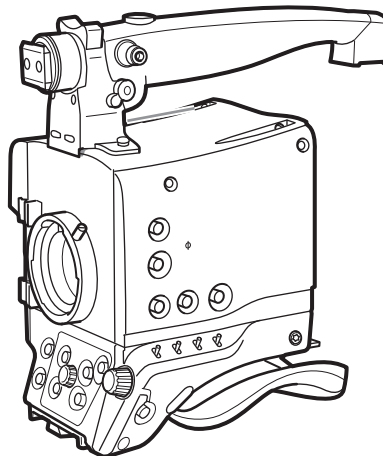


Maintenance Manual

13-00061-000 March 2019 v1.0



LDX 82/86/86^N Series

High Frame Rate/HD/3G/4K Camera Platform



Declaration of Conformity

We, Grass Valley Nederland B.V., Bergschot 69, 4817 PA Breda, The Netherlands, declare under our sole responsibility that these products are in compliance with the following standards:

- EN62368-1:2014 + AC:2015 — Safety
- EN55032:2012 + C2:2013 — EMC (Emission)
- EN55103-2:2009 — EMC (Immunity)

following the provisions of:

- a. the Low Voltage directive 2014/35/EU
- b. the EMC directive 2014/30/EU
- c. the RoHS directive 2011/65/EU

FCC CLASS A Statement

This product generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause interference to radio communications.

It has been tested and found to comply with the limits for a CLASS A digital device pursuant to part 15 of the FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

Operation of this product in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Copyright

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Trademarks

Grass Valley, LDX Series and derivatives are trademarks or registered trademarks of Grass Valley Canada. Belden Inc., Grass Valley Canada and other parties may also have trademark rights in other terms used herein.

Recycling

Visit www.grassvalley.com for recycling information.

Packing for return

If a unit is being returned to Grass Valley for servicing, try to use the containers and materials of the original packaging. Attach a tag indicating the type of service required, return address, model number, full serial number and the return number which will be supplied by your Grass Valley service centre. If the original packing is not available or can no longer be used contact your regional Grass Valley service representative to have a return package provided.

Important information

This information is intended as a guide for trained and qualified personnel who are aware of the dangers involved in handling potentially hazardous electrical / electronic equipment. It is not intended to contain a complete list of all safety precautions which should be observed by personnel in using this or other electronic equipment.

The installation, maintenance and service of this equipment involves risks both to personnel and equipment and must be performed only by qualified personnel exercising due care.

Personnel engaged in the installation, operation, maintenance or servicing of this equipment are urged to become familiar with First Aid theory and practises.

During installation and operation of this equipment, local building safety and fire protection standards must be observed.

Whenever it is likely that safe operation is impaired, the apparatus must be made inoperative and secured against any unintended operation. The appropriate servicing authority must then be informed. For example, safety is likely to be impaired if the apparatus fails to perform intended function or shows visible damage.

Warnings and Cautions

When performing service, be sure to read and comply with the warning and caution notices appearing in the manuals. Warnings indicate danger that requires correct procedures or practices to prevent death or injury to personnel. Cautions indicate procedures or practices that should be followed to prevent damage or destruction to equipment or property.

Warnings

- THE CURRENTS AND VOLTAGES PRESENT IN THIS EQUIPMENT ARE DANGEROUS. ALL PERSONNEL MUST AT ALL TIMES FOLLOW THE SAFETY REGULATIONS.
- ALWAYS DISCONNECT POWER BEFORE REMOVING COVERS OR PANELS.
- ALWAYS DISCHARGE HIGH VOLTAGE POINTS BEFORE SERVICING.
- NEVER MAKE INTERNAL ADJUSTMENTS, PERFORM MAINTENANCE OR SERVICE WHEN ALONE OR WHEN FATIGUED.
- IN CASE OF AN EMERGENCY ENSURE THAT THE POWER IS DISCONNECTED.
- ANY INTERRUPTION OF THE PROTECTION CONDUCTOR INSIDE OR OUTSIDE THE APPARATUS, OR DISCONNECTION OF THE PROTECTIVE EARTH TERMINAL, IS LIKELY TO MAKE THE APPARATUS DANGEROUS. INTENTIONAL INTERRUPTION IS PROHIBITED.

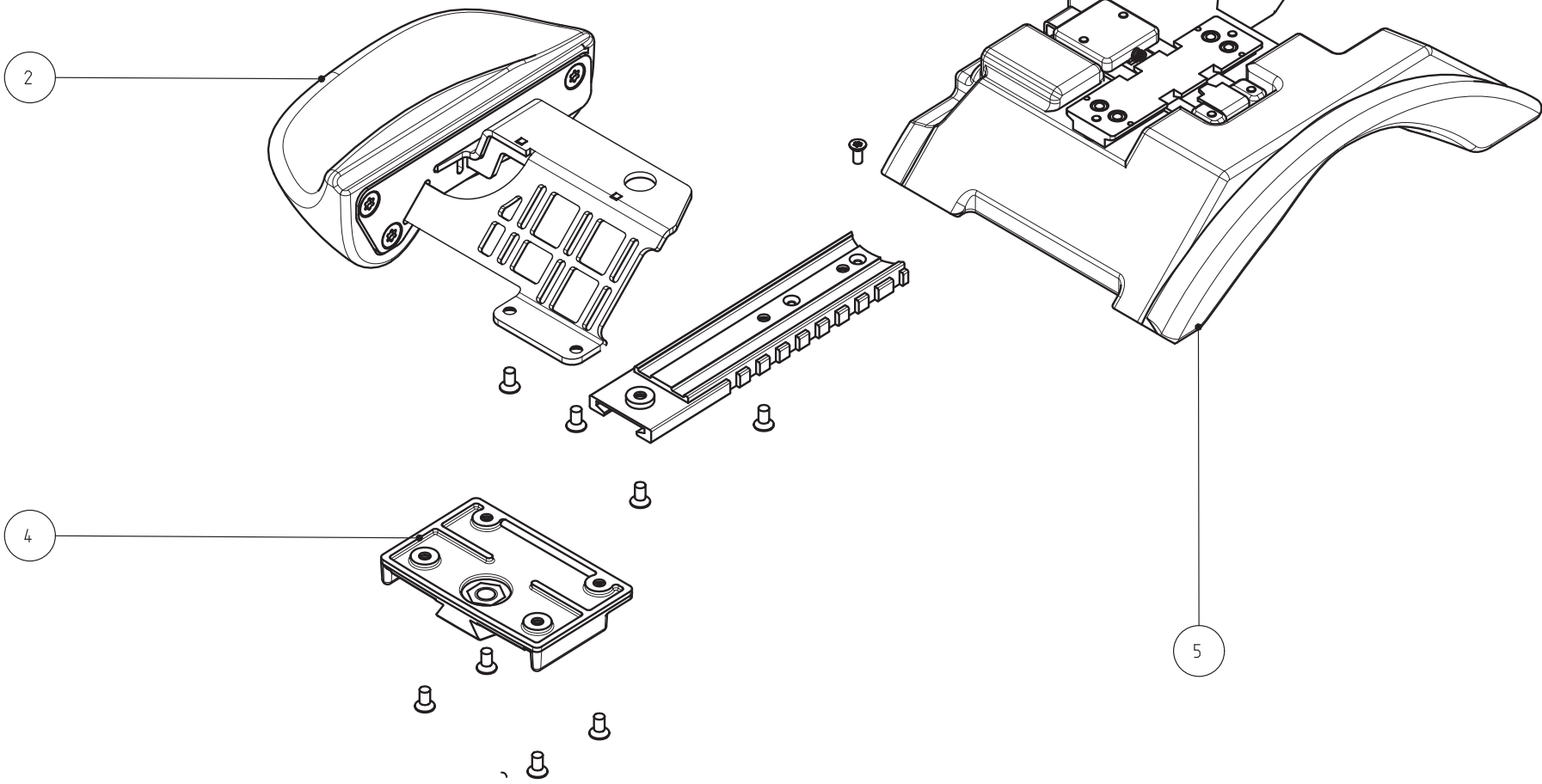
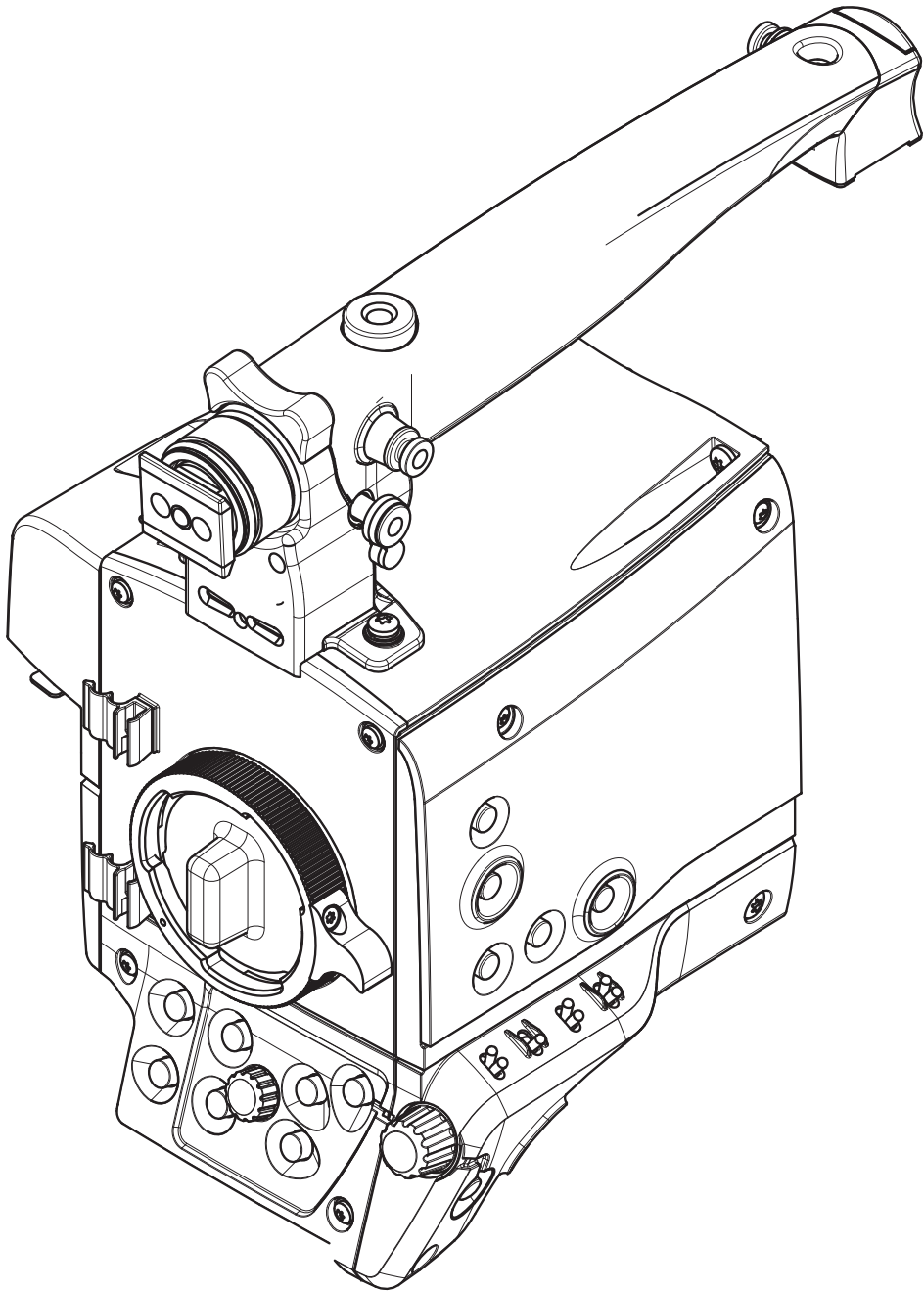
Cautions


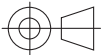
- To prevent risk of overheating, ventilate the product correctly.
-

LDX82/86/86n (All versions)

List of Field Replacable Units (FRUs):

Pos	Part Number	Description
2	510-00006-01	SIDEGRIP ASSY
4	3922 407 57422	V-BLOCK MACHINED
5	510-00009-01	SHOULDERPAD ASSY



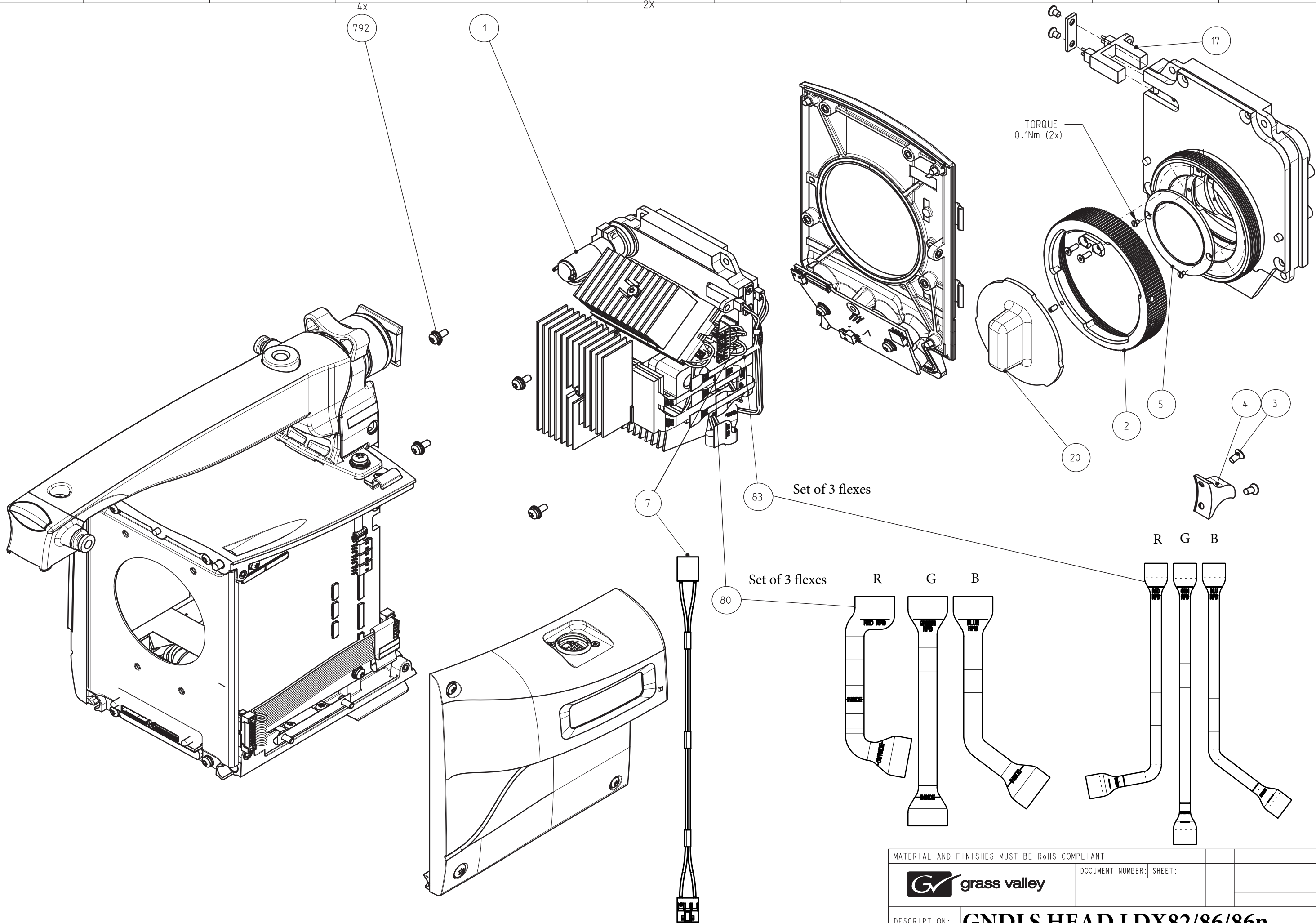
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GENERAL ROUGHNESS: Ra 3.2 um	IF TOLERANCE AND TOLERANCE TABLE ARE ABSENT THEN APPLY DIM ±0.2 ANGLE ±1°	UNIT:		SCALE:	FORMAT:	SHEET:



GNDLS HEAD LDX82-86-86n

List of Field Replacable Units (FRUs):

Pos	Part Number	Description	
1	500-00072-01	FRONT MODULE CMOS 4K U23C	For LDX86n
1	500-00003-01	FRONT MODULE CMOS HS	For DLX82/86
2	3922 404 23633	BAJONET RING	
3	8322 299 71887	CSK SCR STL ST M3X6 BLACK	
4	3922 404 44032	BAJONET RING GRIP	
5	3922 407 51582	UV/IR FILTER ASSY	
7	3922 407 61453	SSB POWER CABLE	
17	3922 407 61233	OPTICAL SWITCH ASSY	
20	3922 400 07891	DUSTCAP	
80	524-00029-03	PCB F--- HS SPIDERFLEX 45P Au	
83	524-00028-03	PCB F--- HS SPIDERFLEX 25P Au	
792	326-00006-01	COMBI SCR PAN STL ST M3X8	

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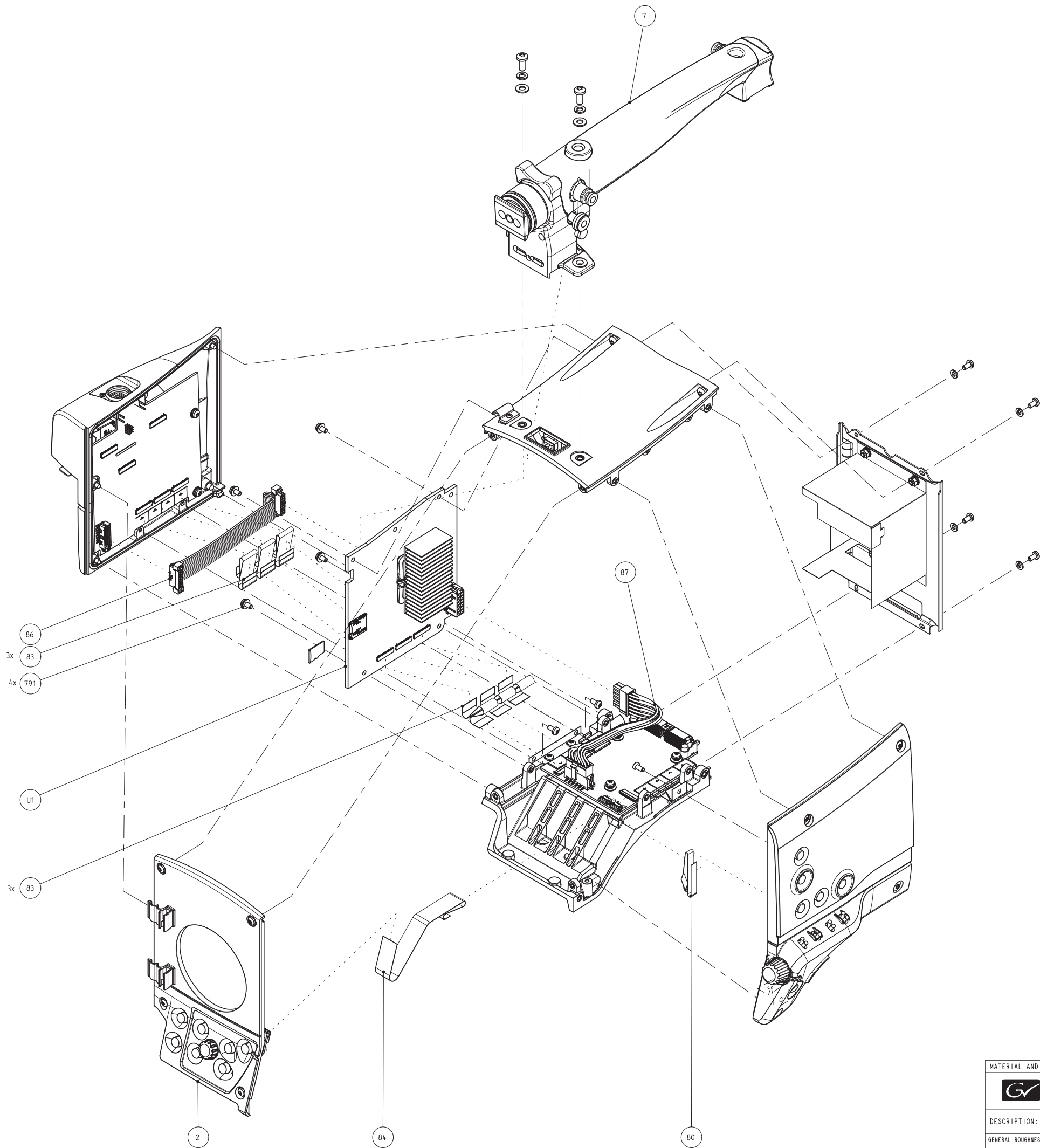
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 grass valley		DOCUMENT NUMBER:		SHEET:		
DESCRIPTION:		GNDLS HEAD LDX82/86/86n				
GENERAL ROUGHNESS:		IF TOLERANCE AND TOLERANCE TABLE ARE ABSENT THEN APPLY		UNIT:		SCALE:
Ra 3.2 um		DIM ±0.2 ANGLE ±1°				FORMAT:
						SHEET:



CAMERA HEAD BASIC

List of Field Replacable Units (FRUs):

Pos	Part Number	Description
7	3922 407 40211	DIG.ZOOM HANDGRIP ASSY
80	2422 015 19425	CLB FLEX 10P FFC 0.5 SUMICARD TL=138MM 30V
83	524-00021-03	PCB F--- GENERIC FPC 45P 0.3MM L=68MM
84	524-00023-03	PCB F--- FPC 45P 0.3MM TL=160MM Au
86	3922 407 61442	POWER CABLE ASSY
87	3922 407 61435	12P WIRING POWER
791	326-00005-01	COMBI SCR PAN STL ST M3X6
U1	522-00048-01	PCBA HS 4K RPB

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MATERIAL AND FINISHES MUST BE RoHS COMPLIANT						
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GENERAL ROUGHNESS: Ra 3.2 um	IF TOLERANCE AND TOLERANCE TABLE ARE ABSENT THEN APPLY DIM ±0.2 ANGLE ±1°	UNIT: 	SCALE:	FORMAT:	SHEET:	

3922 407 55801 BOTTOM PLATE ASSY

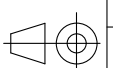

List of Field Replacable Units (FRUs):

Pos	Part Number	Description
3	3922 405 08022	AIR FILTER FOAM
4	3922 407 62301	EMC MATERIAL CLIP-ON
5	3922 203 00273	SPR CMP 4.57 X 6.35 0.53 NMM STL ST
6	3922 203 00273	SLV REG PA 7.5 x 3.1 312 0838 599 35
7	3922 405 08092	RIGHT COVER STRAIN RELIEF
8	3922 405 08103	LEFT COVER STRAIN RELIEF
11	3922 203 00303	WSH PLN 8x4.1x0.5 PA
80	2422 015 18547	CLB FLEX 10P FFC 0.5 SUMICARD TL=78MM 30V
U1	3922 406 56001	INTERCON. POWER BRD

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FOLD, THEN
MOUNT
ACCORDING
TO DRAWING

FOLD, THEN MOUNT
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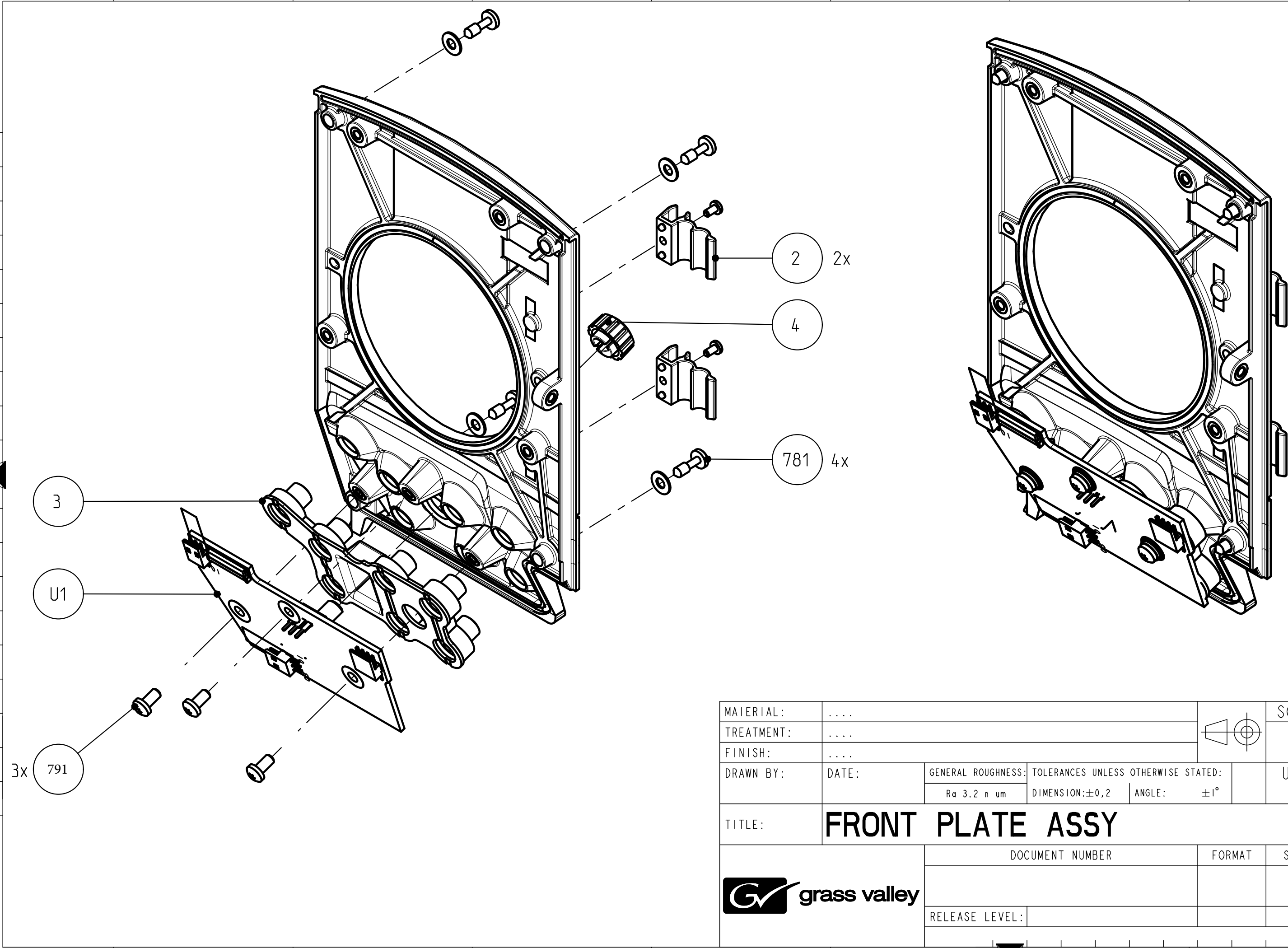
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FINISH:						
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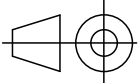

3922 407 55811 FRONT PLATE ASSY

List of Field Replacable Units (FRUs):

Pos	Part Number	Description
2	3922 400 10041	CABLECLAMP
3	3922 400 11603	RUBBER PAD FSP
4	3922 400 11642	VOLUME KNOB
781	2522 200 03024	PAN CAP SCR STL.ST M3x10
U1	3922 406 55981	FRONT SWITCH PANEL
791	326-00005-01	COMBI SCR PAN STL ST M3X6

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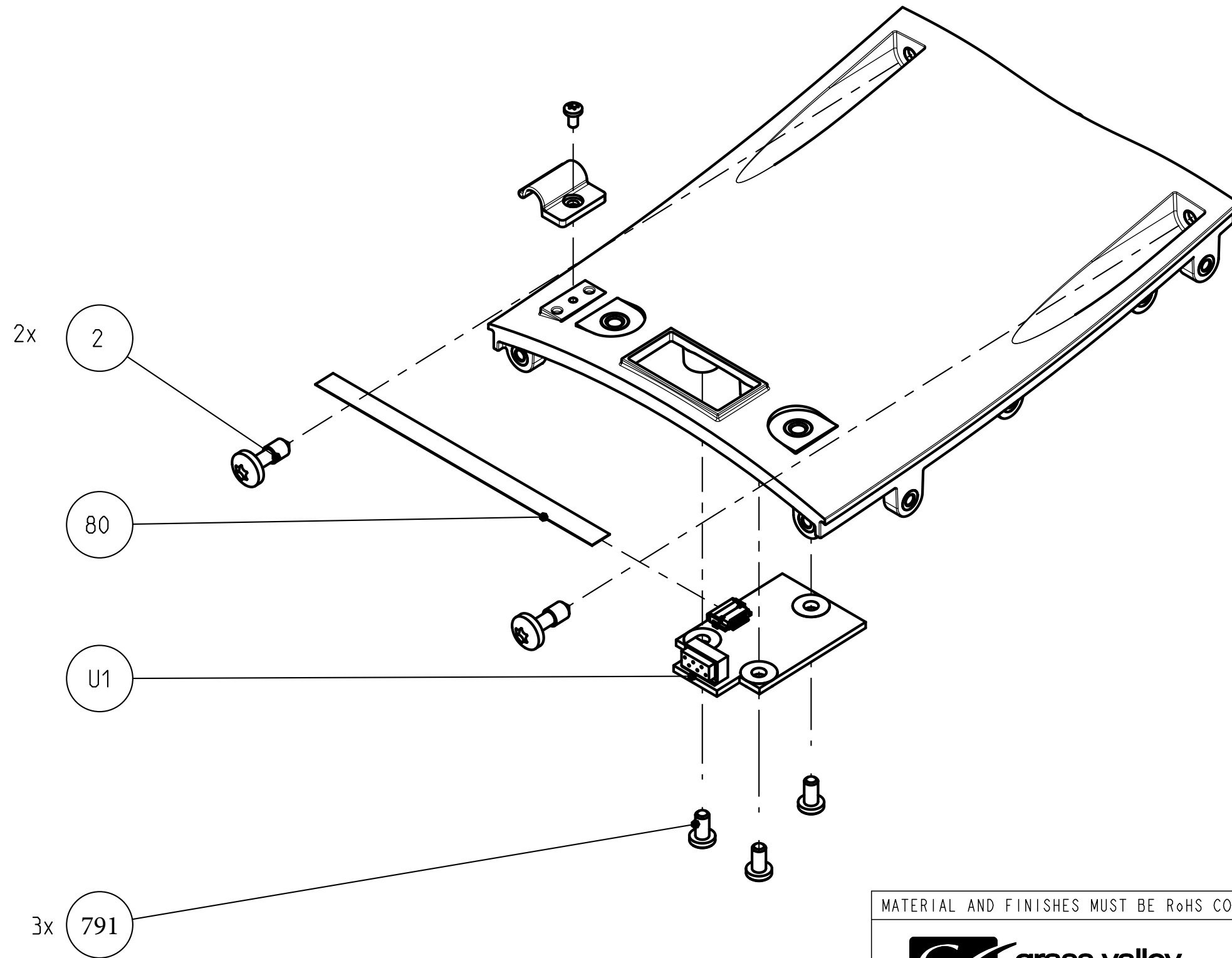
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FINISH:						
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TITLE:		FRONT PLATE ASSY					
 grass valley			DOCUMENT NUMBER			FORMAT	SHEET
			RELEASE LEVEL:				


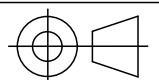
500-00006-01 TOP PLATE ASSY

List of Field Replacable Units (FRUs):

Pos	Part Number	Description
2	2522 200 03032	PAN CAP SCR STL.ST M4x12
80	2422 015 18547	CLB FLEX 10P FFC 0.5 SUMICARD TL=78MM 30V
791	326-00005-01	COMBI SCR PAN STL ST M3X6
U1	3922 406 56021	PCBA Handgrip IF Board

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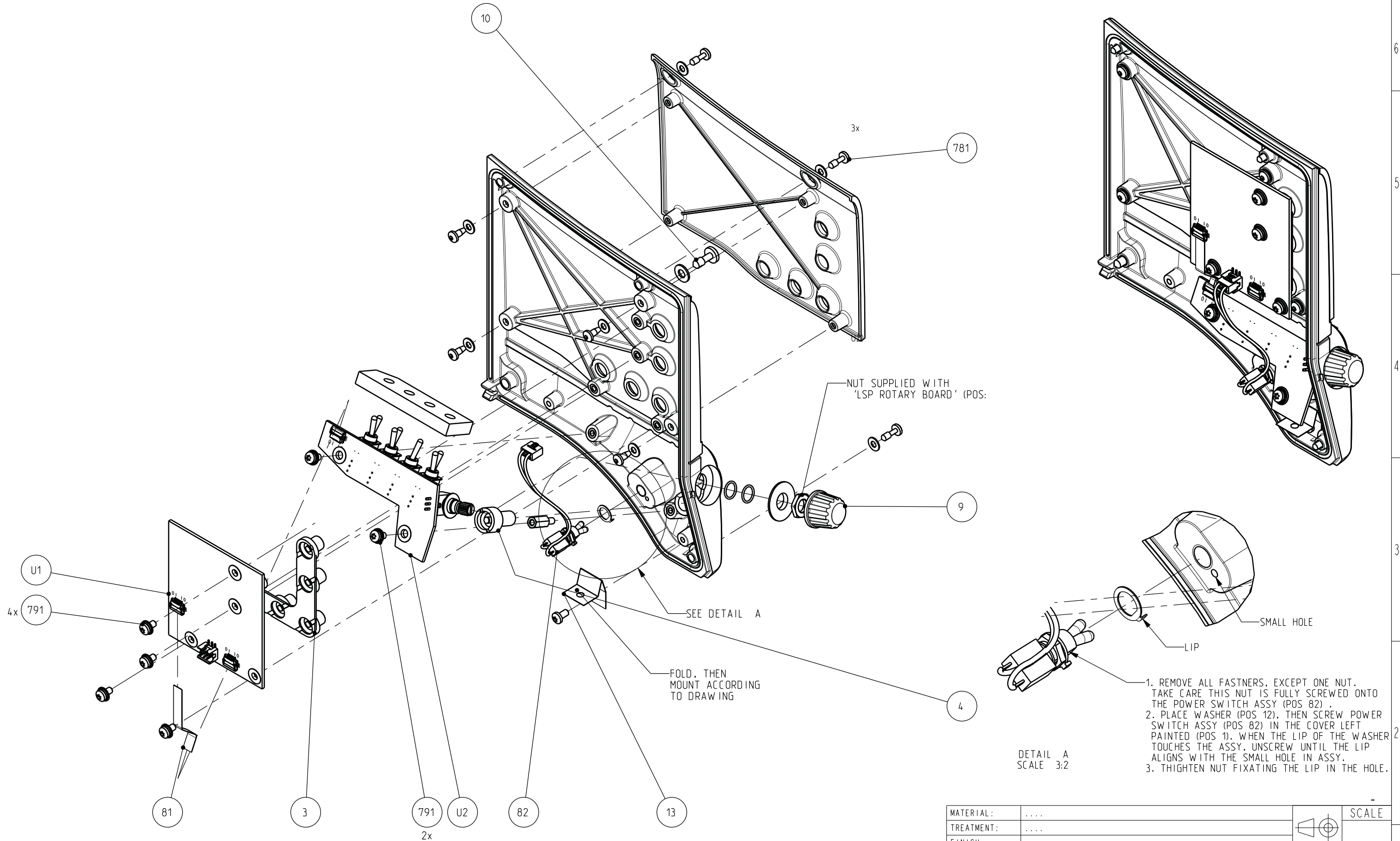
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GENERAL ROUGHNESS: Ra 3.2 um	IF TOLERANCE AND TOLERANCE TABLE ARE ABSENT THEN APPLY DIM ± 0.2 ANGLE $\pm 1^\circ$	UNIT:		SCALE:	FORMAT:	SHEET:

3922 407 55841 COVER LEFT ASSY

List of Field Replacable Units (FRUs):

Pos	Part Number	Description
3	3922 400 11612	RUBBER PAD LSP
4	3922 400 11622	RUBBER KNOB
9	3922 400 11651	ROTARY KNOB
10	2522 200 03032	PAN CAP SCR STL.ST M4x12
13	3922 405 08103	LEFT COVER STRAIN RELIEF
U1	3922 406 55991	PCBA LSP BOARD
U2	3922 406 56141	PCBA LSP Rotary Board
81	3922 205 00005	CLB FLEX 10P FFC 0.5 SUMICARD TL=46MM 30V
82	3922 407 26063	POWER SWITCH ASSY
781	2522 200 03024	PAN CAP SCR STL.ST M3x10
791	326-00005-01	COMBI SCR PAN STL ST M3X6

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DETAIL A
SCALE 3:2

1. REMOVE ALL FASTNERS, EXCEPT ONE NUT. TAKE CARE THIS NUT IS FULLY SCREWED ONTO THE POWER SWITCH ASSY (POS 82) .
2. PLACE WASHER (POS 12), THEN SCREW POWER SWITCH ASSY (POS 82) IN THE COVER LEFT PAINTED (POS 1). WHEN THE LIP OF THE WASHER TOUCHES THE ASSY, UNSCREW UNTIL THE LIP ALIGNS WITH THE SMALL HOLE IN ASSY.
3. THIGHTEN NUT FIXATING THE LIP IN THE HOLE.

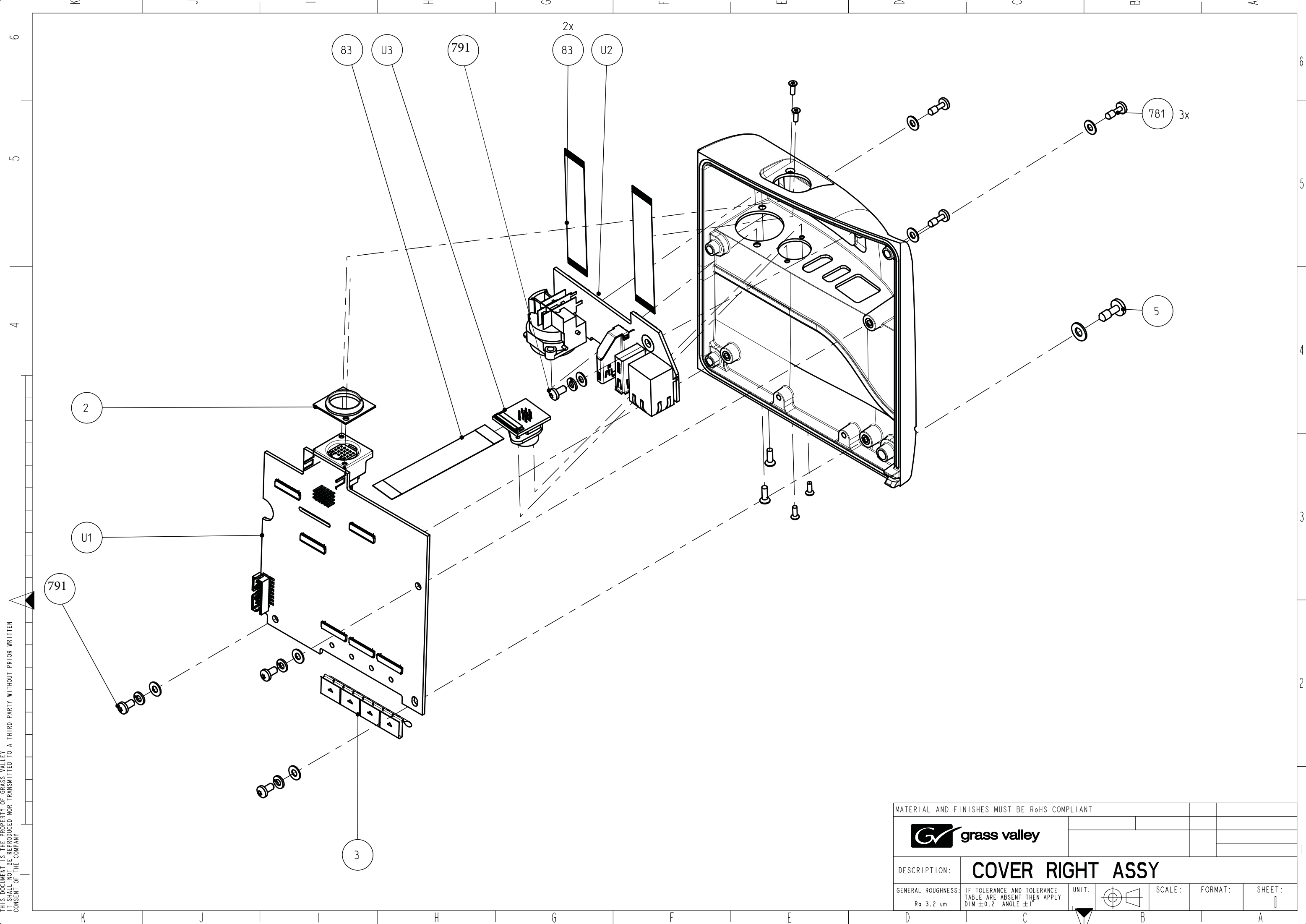
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TREATMENT:				
FINISH:				
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TITLE: COVER LEFT ASSY					
		DOCUMENT NUMBER		FORMAT	SHEET




500-00004-01 - COVER RIGHT ASSY

List of Field Replacable Units (FRUs):

Pos	Part Number	Description
2	3922 400 08501	SEALING VF-CONNECTOR
3	3922 407 62301	EMC MATERIAL CLIP-ON
5	2522 200 03032	PAN CAP SCR STL.ST M4x12
83	524-00021-03	PCB F--- GENERIC FPC 45P 0.3MM L=68MM Au
781	2522 200 03024	PAN CAP SCR STL.ST M3x10
791	326-00005-01	COMBI SCR PAN STL ST M3X6
U1	3922 406 57271	PCBA HS RCB
U2	3922 406 57401	PCBA HS HDMI AND MIC BOARD
U3	3922 406 56331	PCBA Lens and RS232 Board

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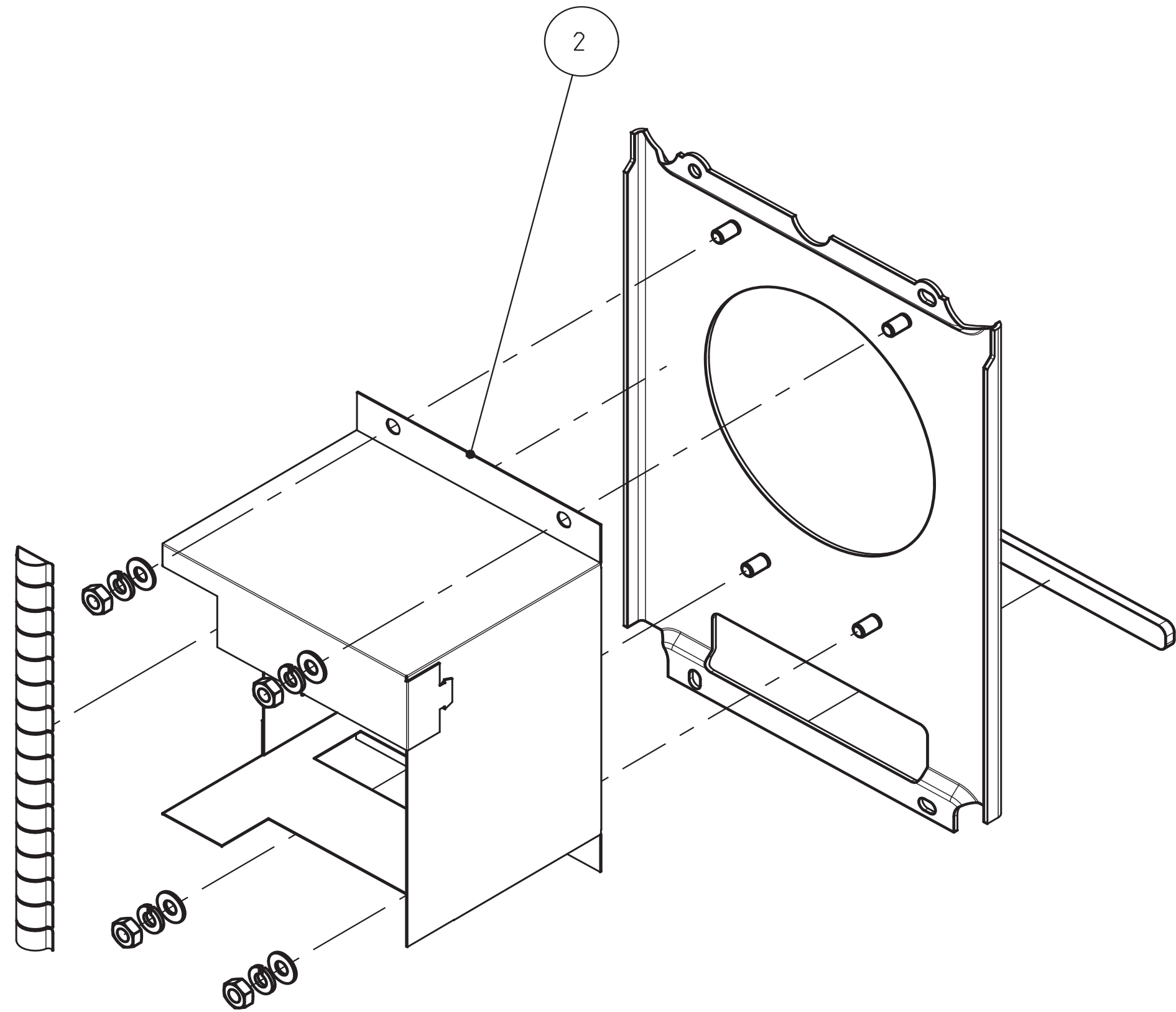
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GENERAL ROUGHNESS: Ra 3.2 um		IF TOLERANCE AND TOLERANCE TABLE ARE ABSENT THEN APPLY DIM ±0.2 ANGLE ±1°		UNIT: 	SCALE:	FORMAT:		SHEET: 	




500-00052-01 DOCKINGPLATE ASSY

List of Field Replacable Units (FRUs):

Pos	Part Number	Description
2	518-00056-01	4K AIR GUIDE

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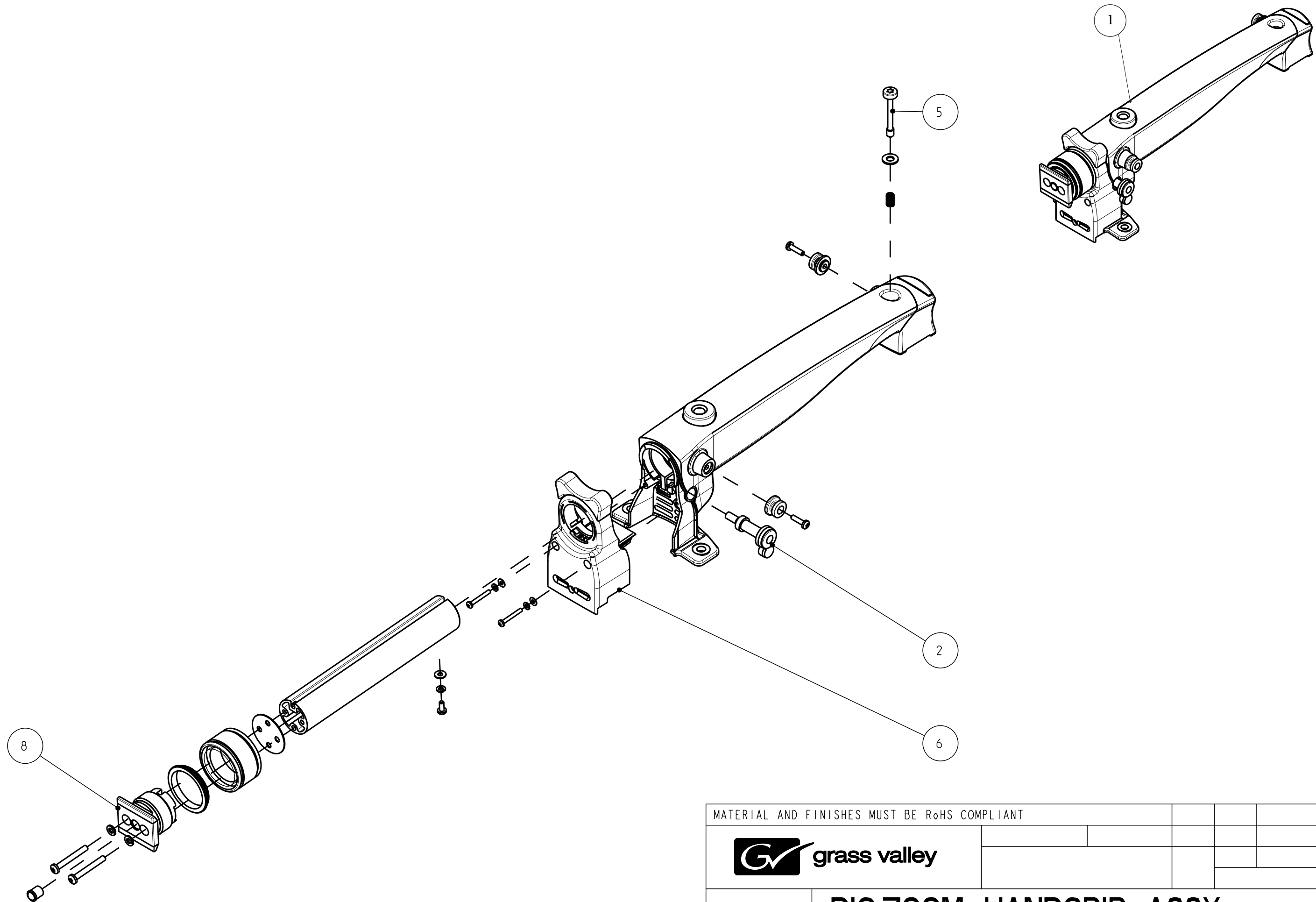
MATERIAL AND FINISHES MUST BE RoHS COMPLIANT									
 grass valley									
DESCRIPTION:		DOCKINGPLATE ASSY							
GENERAL ROUGHNESS: Ra 3.2 um		IF TOLERANCE AND TOLERANCE TABLE ARE ABSENT THEN APPLY DIM ±0.2 ANGLE ±1°		UNIT: 		SCALE:	FORMAT:	SHEET:	


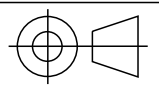
3922 407 40211 DIG.ZOOM HANDGRIP ASSY

List of Field Replacable Units (FRUs):

Pos	Part Number	Description
1	3922 407 40211	DIG.ZOOM HANDGRIP ASSY
2	3922 407 25553	CLAMPBOLT
5	3922 080 02961	PANHEAD CAPTIVE SCREW M4X30
6	3922 407 39502	ZOOMCONTROL ASSY
8	3922 407 24012	VF SCREW LONG ASSY

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MATERIAL AND FINISHES MUST BE RoHS COMPLIANT					
 grass valley					
DESCRIPTION:			DIG.ZOOM HANDGRIP ASSY		
GENERAL ROUGHNESS: Ra 3.2 um		IF TOLERANCE AND TOLERANCE TABLE ARE ABSENT THEN APPLY DIM ± 0.2 ANGLE $\pm 1^\circ$		UNIT: 	SCALE: FORMAT:
				SHEET:	